

Notice of Allowability

Application No.

10/500,943

Examiner

William W. Moore

Applicant(s)

POULOSE ET AL.

Art Unit

1656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 11 June 2007 and the interview conducted 22 June 2007.
2. ☒ The allowed claim(s) is/are 3,5,7-10 and 13.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Amend claims 3, 5 and 7-10 thus:

3. (Amended) A subtilisin variant of a precursor subtilisin wherein the~~[[,]] said~~ subtilisin variant has the same net electrostatic charge at pH 6.0 as the net electrostatic charge of the precursor subtilisin at pH 6.0 and comprises the amino acid substitution R170S comprising~~one or more modifications at a charged amino acid residue position said variant being characterized by having the same net electrostatic charge as said precursor protease, wherein said variant comprises an amino acid sequence having a substitution at the residue position equivalent to residue position 170, and further comprises comprising a substitution at one or more positions corresponding to 27, 45, 181, 251 and 271 wherein the substitution is K27R, amino acid substitutions selected from the group consisting of R45N, D181N, K251G and or E271T, wherein the positions are numbered by correspondence with the amino acid sequence of *Bacillus amyloliquefaciens* subtilisin as set forth in SEQ ID NO:3, the subtilisin variant has proteolytic activity, and is a mature subtilisin comprising the gaps present in the amino acid sequence of a *Bacillus lentus* subtilisin relative to the amino acid sequence of the *Bacillus amyloliquefaciens* subtilisin depicted in Figure 3.~~
5. (Amended) The subtilisin variant of claim 3, further comprising one or more~~an~~ additional amino acid substitutions~~substitution at positions position~~ corresponding to positions 14, 49, 102, and 258~~position 87~~ of the amino acid sequence of the *Bacillus amyloliquefaciens* subtilisin as set forth in SEQ ID NO:3.
7. (Amended) A DNA encoding a~~the~~ subtilisin~~protease~~ variant of claim 3.
8. (Amended) An expression vector comprising~~encoding~~ the DNA of claim 7.
9. (Amended) A host cell comprising~~transformed with~~ the expression vector of claim 8.
10. (Amended) A cleaning composition comprising the subtilisin~~protease~~ variant of claim 3 and a surfactant.
13. (Amended) The subtilisin variant of claim 5 wherein said subtilisin variant is selected from the group consisting of S49R+G102E+R170S+E271T and P14R+R45N+R170S+G258R.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Kamrin T. MacKnight on 22 June 2007.

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The following is an examiner's statement of reasons for allowance:

Claim 3 as amended is supported by the disclosures at page 3, lines 1-7, and page 7, lines 3-21, of the specification and the description of Figure spanning pages 3 and 4 of the specification, particularly lines 1 and 2 at page 4. Claim 5 as amended is supported by the disclosures at of the specification and to describe specific, charge-balanced, substitution pairs disclosed, e.g., at pages 17-18 and in Tables 3-5 at pages 39-42 of the specification and the new claim 13 thus properly depends from claims 3 and 5. Claims 7-10 and 13 are amended to clarify the intended subject matters and to make proper reference to the claims from which they depend. The subject matter described by the claims is free of the prior art of record herein, and claims 3, 5, 7-10 and 13 are allowed herewith.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William W. Moore whose telephone number is 571.272.0933 and whose FAX number is 571.273.0933. The examiner can normally be reached Monday through Friday between 9:00AM and 5:30PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisory Primary Examiner, Dr. Kathleen Kerr Bragdon, can be reached at 571.272.0931. The official FAX number for all communications for the organization where this application or proceeding is assigned is 571.273.8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571.272.1600.

William W. Moore
22 June 2007

/Nashed/
Nashaat T. Nashed, Ph.D.
Primary Examiner